

REMARKS

1. Claims 1-153 were pending. Of these, claims 136-153 are withdrawn from consideration and claims 1-135 stand rejected. This communication amends claims 1, 3, 4, 6, 10, 14, 17, 23, 24, 30, 34, 38, 89, 90, 97, 102, 103, 105, 107, 112-115, 117, 118, 119, 120, 123-125, 129 and 130; cancels claims 2, 96, 116, 127, 128 and 136-155; and adds claims 156-159.

Reconsideration of this application is respectfully requested.

2. Claims 114, 117, 120, 123, 125, 128 and 130 stand objected to because each of these claims depends from itself. In response, each of claims 114, 117, 120, 123, 125 and 130 has been amended to include an appropriate dependency and claim 128 has been canceled. Accordingly, withdrawal of this objection is respectfully requested.

3. Claims 1-4 and 6-11, 17, 19, 22, 24, 25, 36, 38, 40, 42-44, 46-72, 74, 81-91, 97-100, 111-113, 119-122, and 133-135 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,295,654 to Farrell.

Independent claims 1, 10, 24, 90, and 112 currently call for an outer fabric layer that reflects heat. Farrell describes a protective garment 10 formed by a plurality of protective elements 20. Each protective element is constructed with a layer 30 of a rigid polymer material, a layer 32 of cushioning resilient material, and a moisture resistant layer 34 such as COOLMAX®. The rigid polymer layer 30 and the moisture resistant layer 34 are each covered with a fabric layer 24.

The Examiner contends that the moisture resistant layer 34 is an impact absorbing foam layer. This contention is not supported by the COOLMAX® website (<http://coolmax.invista.com/>), which states that COOLMAX® is a fabric. Moreover, there is nothing in Farrell that expressly or inherently describes that the moisture resistant layer 34 is an impact absorbing layer.

In any case, Farrell does not expressly or inherently describe that the fabric layers 24 reflect heat. Thus, claims 1, 10, 24, 90, and 112 are not anticipated by Farrell. Since dependent claims 3, 4 and 6-9, 11, 17, 19, 22, 25, 36, 38, 40, 42-44, 46-72, 74, 81-89, 91, 97-100, 111, 113, 119-122, and 133-135 also require a heat reflecting outer fabric layer, for at least this reason, these claims are not anticipated by Farrell.

Farrell also does not expressly or inherently describe a cushioning pad fastened to the shell assembly with at least one snap fastener (claim 54); first and second shell assembly halves connected by a first protector plate (claims 56 and 62) or a second protector plate (claim 58 and 64); or the functionality provided by the protector plates (claims 57, 58, 63 and 65).

The Examiner contends that the padded elastic waist band 54 described in Farrell is the belt strap system recited in claim 67. However, the waist band of Farrell does not meet the structure of the belt strap system recited in claim 67, which comprises a laminate having at least one impact absorbing layer which allows air to flow therethrough.

Claims 11, 25, 81, 82, 83, 84, 86, 87, 88, 89, 91 and 113 have been grouped into this rejection without explanation. Farrell does not expressly or inherent describe an impact absorbing layer comprising reticulated foam (claims 11, 25, 91 and 113); a lower shoulder panel fastened to an inner shoulder area by two straps that cross one another, (claims 81 and 82); protector panels comprising ventilation holes (claim 83); protector panels that can be individually replaced with a protector panel having one of at least a different predetermined size and a different predetermined shape (claims 84 and 86); or cushioning pads individually replaceable with a cushioning pad having at least one of a different predetermined size and a different predetermined shape (claims 87-89).

In view of the foregoing, withdrawal of this rejection is respectfully urged.

4. Claims 5, 12, 18, 20, 26, 37, 39, 41, 45, 73, 92, 101, 109, 110, 114, 123, 131 and 132 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell. In support of this rejection the Examiner contends:

It would have been obvious to one skilled in the art at the time the invention was made to form the outer fabric of Farrell from any desired material that was available at the device was made as required for a particular application thereof. Further, it would have been obvious that the cushioning pad and shell assembly of Farrell can be made of any color as a matter of design choice.

Dependent claims 5, 12, 18, 20, 26, 37, 39, 41, 45, 73, 92, 101, 109, 110, 114, 123, 131 and 132 include among other features, a heat reflecting outer fabric layer, which is not described by Farrell. The arguments set forth above regarding this feature and Farrell are therefore, repeated herein and based on this feature alone, make claims 5, 12, 18, 20, 26, 37, 39, 41, 45, 73,

92, 101, 109, 110, 114, 123, 131 and 132 patentable over Farrell. In addition, Farrell does not describe, teach or suggest the subject matter recited in claims 5, 12, 18, 20, 26, 37, 39, 41, 45, 73, 92, 101, 109, 110, 114, 123, 131 and 132. Specifically, Farrell does not describe, teach or suggest an outer fabric layer comprising an aluminum polyester (claims 5, 37, 101 and 123); a black colored foam (claims 12, 26, 92, and 114); a light colored outer fabric layer facing toward the shell (claims 18, 39, 45, 109, and 131); a dark colored inner fabric layer facing away from the shell assembly (claims 20, 41, 45, 110 and 132); and a pearlized white metallic shell assembly.

The specification of the present application teaches that the claimed aluminum polyester outer fabric layer operates as a radiant heat barrier, unlike the fabrics used in Farrell. Farrell does not describe, teach or suggest the desirability or address the problems overcome by using an outer fabric layer that operates as a radiant heat barrier in a protective garment. Accordingly, it would not have been obvious at the time of invention to use an aluminum polyester outer fabric layer in the Farrell protective garment.

The specification of the present application teaches that the claimed black color of the reticulated foam allows it to absorb heat generated by the user's body. Farrell does not describe, teach or suggest the desirability or address the problems overcome by using a black color foam in a protective garment. Accordingly, it would not have been obvious at the time of invention to use black foam in the Farrell protective garment.

The specification of the present application teaches that the claimed light colored outer fabric layer facing toward the shell allows the fabric to reflect heat away from the user's body. Farrell does not describe, teach or suggest the desirability or address the problems overcome by using a light colored outer fabric layer facing toward the shell in a protective garment. Accordingly, it would not have been obvious at the time of invention to use a light colored outer fabric layer in the Farrell protective garment.

The specification of the present application teaches that the claimed dark colored inner fabric layer facing away from the shell absorbs heat generated by the user's body. Farrell does not describe, teach or suggest the desirability or address the problems overcome by using a dark colored inner fabric layer facing away from the shell in a protective garment. Accordingly, it would not have been obvious at the time of invention to use a dark colored inner fabric layer in the Farrell protective garment.

The specification of the present application teaches that the claimed pearlized white metallic shell assembly reflects heat and reduces the amount of heat absorbed by the shell assembly. Farrell does not describe, teach or suggest the desirability or address the problems overcome by using a pearlized white metallic shell assembly in a protective garment. Accordingly, it would not have been obvious at the time of invention, as a matter of design choice, to use a pearlized white metallic shell assembly in the Farrell protective garment.

In view of the foregoing, withdrawal of this rejection is respectfully urged.

5. Claims 13-16, 21, 23, 27-35, 52-54, 75-80, 93-96, 102-108, 115-118 and 124-130 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell as applied to claim 10 and further in view of U.S. Patent 6,453,477 to Bainbridge et al. (Bainbridge).

Dependent claims 13-16, 21, 23, 27-33, 52-54, 75-80, 93-96, 102-106, 115-118 and 124-130 currently call for an outer fabric layer that reflects heat. Farrell does not describe, teach or suggest an outer fabric layer that reflects heat. Bainbridge fails to cure this deficiency of Farrell, as Bainbridge also does not describe, teach or suggest an outer fabric layer that reflects heat. Therefore, based on this feature alone, claims 13-16, 21, 23, 27-33, 52-54, 75-80, 93-96, 102-106, 115-118 and 124-130 are patentable over Farrell in view of Bainbridge.

Claims 28, 29, 34 (claim 34 currently rewritten in independent form), 35, 94, 95, 105, 106, 107 (claim 107 currently rewritten in independent form), 108, 117, 118, 129 and 130, which require an impact absorbing layer comprising a substrate of visco-elastic polymer, have been grouped into this rejection without explanation. Farrell does not describe, teach or suggest an impact absorbing layer comprising a substrate of visco-elastic polymer as required in these claims. Bainbridge fails to cure this deficiency of Farrell because Bainbridge does not describe, teach or suggest an impact absorbing layer comprising a substrate of visco-elastic polymer. Thus, claims 34, 35, 107 and 108 are patentable over Farrell in view of Bainbridge. Claims 28, 29, 94, 95, 105, 106, 117, 118, 129 and 130, which are patentable over Farrell in view of Bainbridge based on the heat reflecting outer fabric layer, further distinguish over Farrell in view of Bainbridge.

Claims 75-80, which require a spring element for strengthening an inner shoulder portion of the shell assembly, have also been grouped into this rejection without explanation. Farrell does not describe, teach or suggest such a spring element. Bainbridge also fails to cure this

deficiency of Farrell as Bainbridge does not describe, teach or suggest a spring element for strengthening an inner shoulder portion of the shell assembly. Thus, claims 75-80, which are patentable over Farrell in view of Bainbridge based on the heat reflecting outer fabric layer, further distinguish over Farrell in view of Bainbridge.

In view of the foregoing, withdrawal of this rejection is respectfully urged.

6. New claims 156-159 directed to a protective pad apparatus and a cushioning pad, have been added herein. New independent claim 156 recites:

A protective pad apparatus comprising:
a shell assembly; and
a cushioning pad fastened to the shell assembly, the cushioning pad comprising a laminate including a substrate of reticulated foam and a substrate of foam beads that are fused together only where the beads contact one another, the substrates allowing air-flow therethrough.

New dependent claim 157 depends from new claim 156 and recites:

The protective pad apparatus according to claim 156, wherein the laminate further includes a substrate of visco-elastic polymer.

New independent claim 158 recites:

A cushioning pad comprising:
a laminate including a substrate of reticulated foam and a substrate of foam beads that are fused together only where the beads contact one another, the substrates allowing air-flow therethrough.

New dependent claim 159 depends from new claim 158 and recites:

The cushioning pad according to claim 158, wherein the laminate further includes a substrate of visco-elastic polymer.

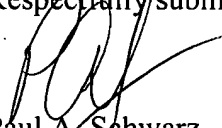
It is respectfully submitted that the prior art cited of record, either alone or in combination, does not describe, teach or suggest the subject matter of new claims 156-159.

7. Favorable reconsideration of this application is respectfully requested as it is believed that all outstanding issues have been addressed herein and, further, that claims 1, 3-95, 97-115, 117-126, 129-135 and 156-157 are in condition for allowance, early notification of which is

earnestly solicited. Should there be any questions or matters whose resolution may be advanced by a telephone call, the examiner is cordially invited to contact applicants' undersigned attorney at his number listed below.

8. The Commissioner is hereby authorized to charge payment of any filing fees required under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17, which are associated with this communication, or credit any overpayment to Deposit Account No. 50-2061.

Respectfully submitted,



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